



H2020 REALVALUE

D2.5 REFACTORED USER INTERFACE (IRELAND)

Date	28/09/2017
Dissemination Level	Public
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Document History

Version	Date	Contributor	Comments
	08/09/2017	Alice Gunn	Initial structure
	18/09/2017	Danny Murray	Core content added
	18/09/2017	Alice Gunn	Final editing
	28/09/2017	Alice Gunn	Edits following peer review



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2. INTRODUCTION

This deliverable demonstrates the design and functionality of the 'Refactored User Interface' available to RealValue participants. This web app interface, created by SSE Airtricity through a subcontracted developer Logic Energy, allows participants to control and interact with their Smart Electric Thermal Storage appliances (SETS) and other appliances from anywhere with internet connectivity.

The first version, which was outlined in D2.4, allowed customers to observe and modify their comfort on and off times and the temperature set point. The enhanced version, presented in this deliverable, has added extra functionality such as the ability to control hot water cylinders as well as improved aesthetics to improve the user experience.

3. HOT WATER CYLINDER CONTROL

The user interface has been enhanced to include the functionality to control hot water cylinders. Users can now view the current water temperature in their cylinder and alter the scheduled comfort levels remotely. Additionally if extra hot water is required immediately the user can instruct the hot water cylinder to instantly heat by clicking the boost button on the hot water cylinder dashboard page, as shown in Figure 2. For example if a customer has family visiting and they require more hot water than normally scheduled, then it is likely they will need to boost the water cylinder to get extra hot water.

There is also the ability to view charts on historic energy and temperature which provides customers with information and increase engagement. It is hoped this available information will improve satisfaction as a result of a better understanding of the heating system.

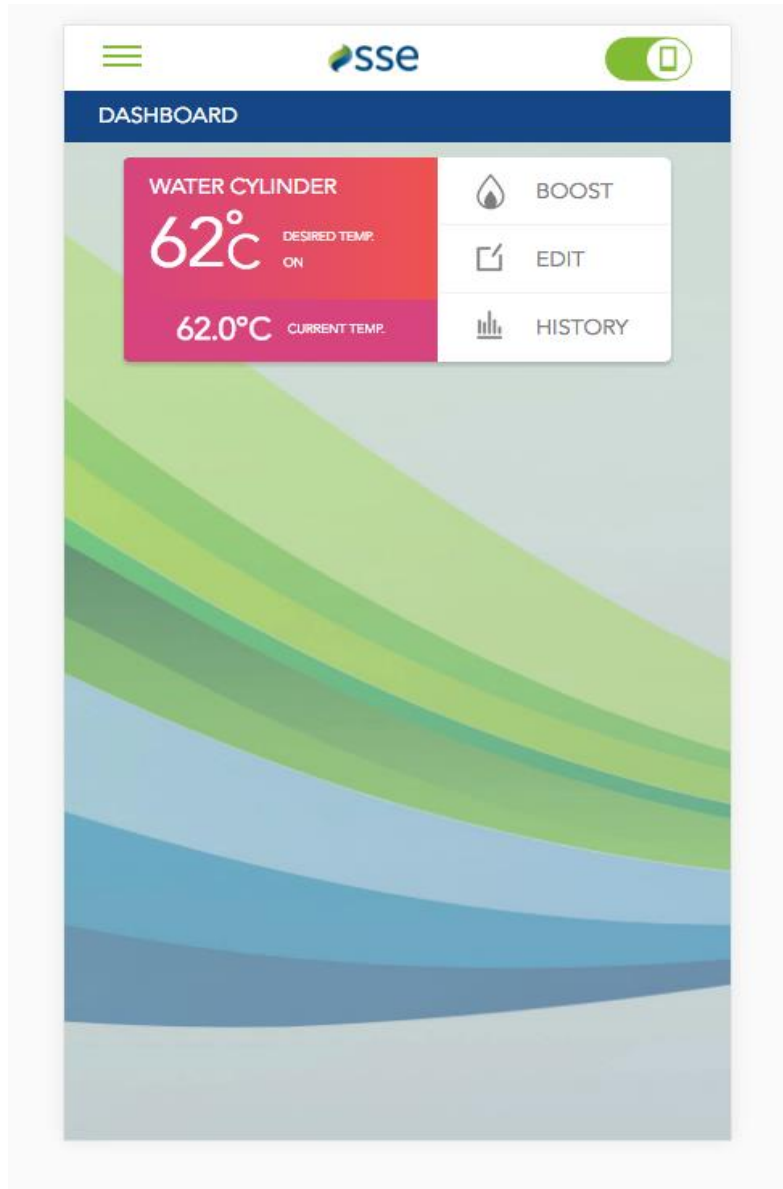


Figure 1: Hot Water Cylinder Dashboard

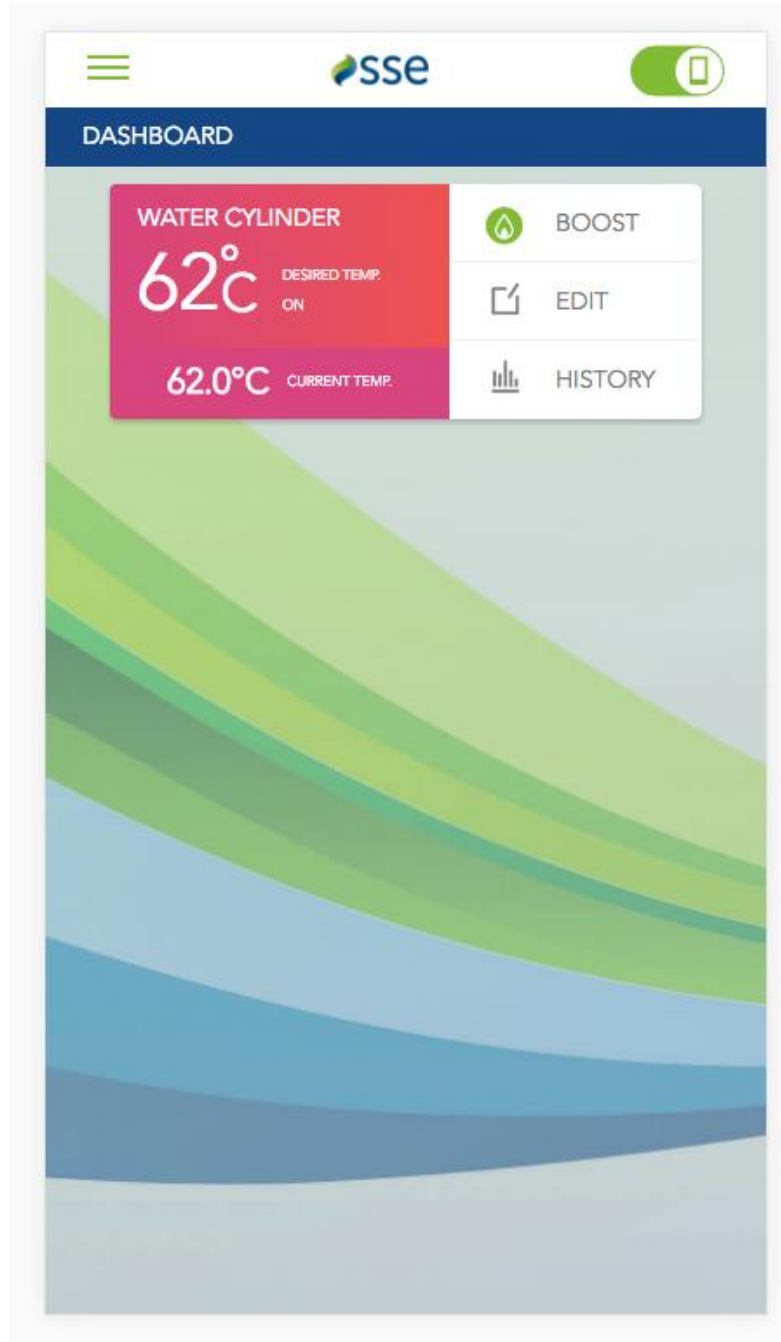


Figure 2: Hot Water Cylinder Dashboard (with boost activated)

4. SMART PLUGS

Customers can now monitor the power and energy consumption of appliances connected to smart plugs. Figure 3 shows an example of how this would look for a room with a number of appliances connected to smart plugs. It displays the current energy usage for each appliance and daily, weekly and monthly consumption patterns can also viewed by clicking on the top right of each appliance.



Figure 3: Smart Plug Monitoring Dashboard

The functionality to control appliances connected to a smart plug will be developed in Q3.

5. USER EXPERIENCE

Ease of access for the user has been prioritised with the enhancements to the web app. The user interface has been changed to a simpler display which is more aesthetically pleasing and clearer, based on customer experiences. This includes a reduction in the number of “taps” which were previously required when changing the time. Previously a user would have to tap through each number one by one to increase it to the desired time. Now the user can swipe, allowing for a more streamlined and faster user experience.

5.1. User Aesthetics

The entire user interface went through a number of aesthetic changes. The new design is less cluttered and more intuitive to the user. Figure 4 and Figure 5 illustrate the changes that have been made to the user interface design.



Figure 4: New User Interface Design

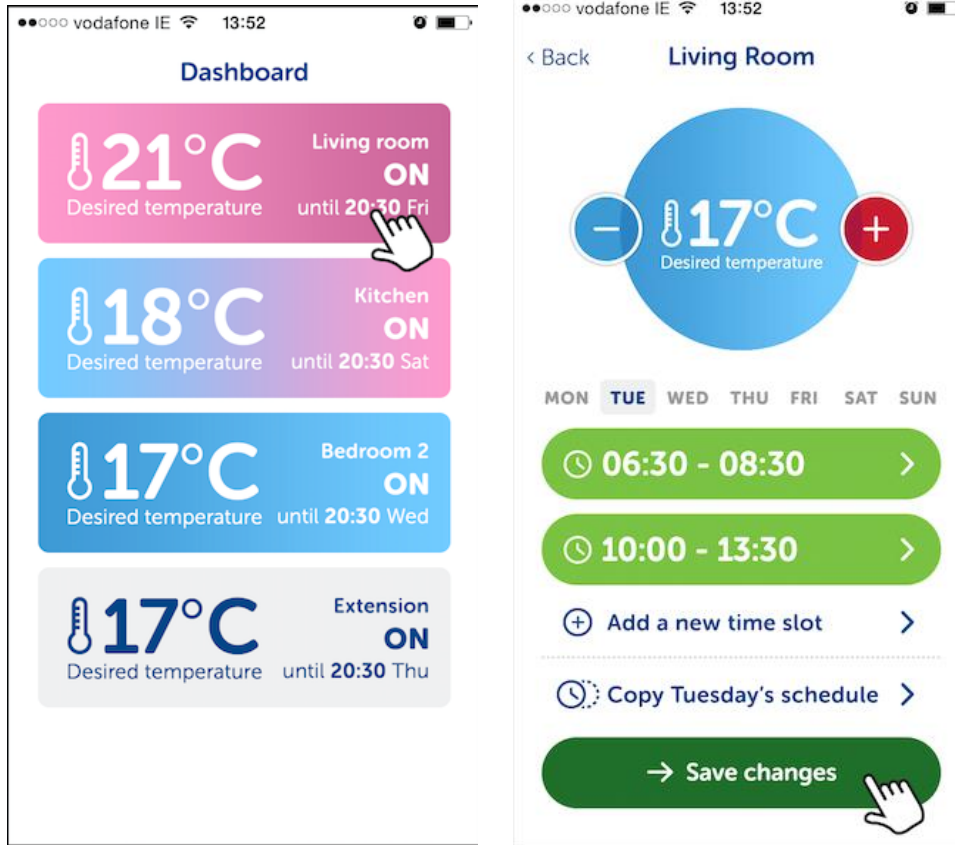


Figure 5: Original User Interface Design

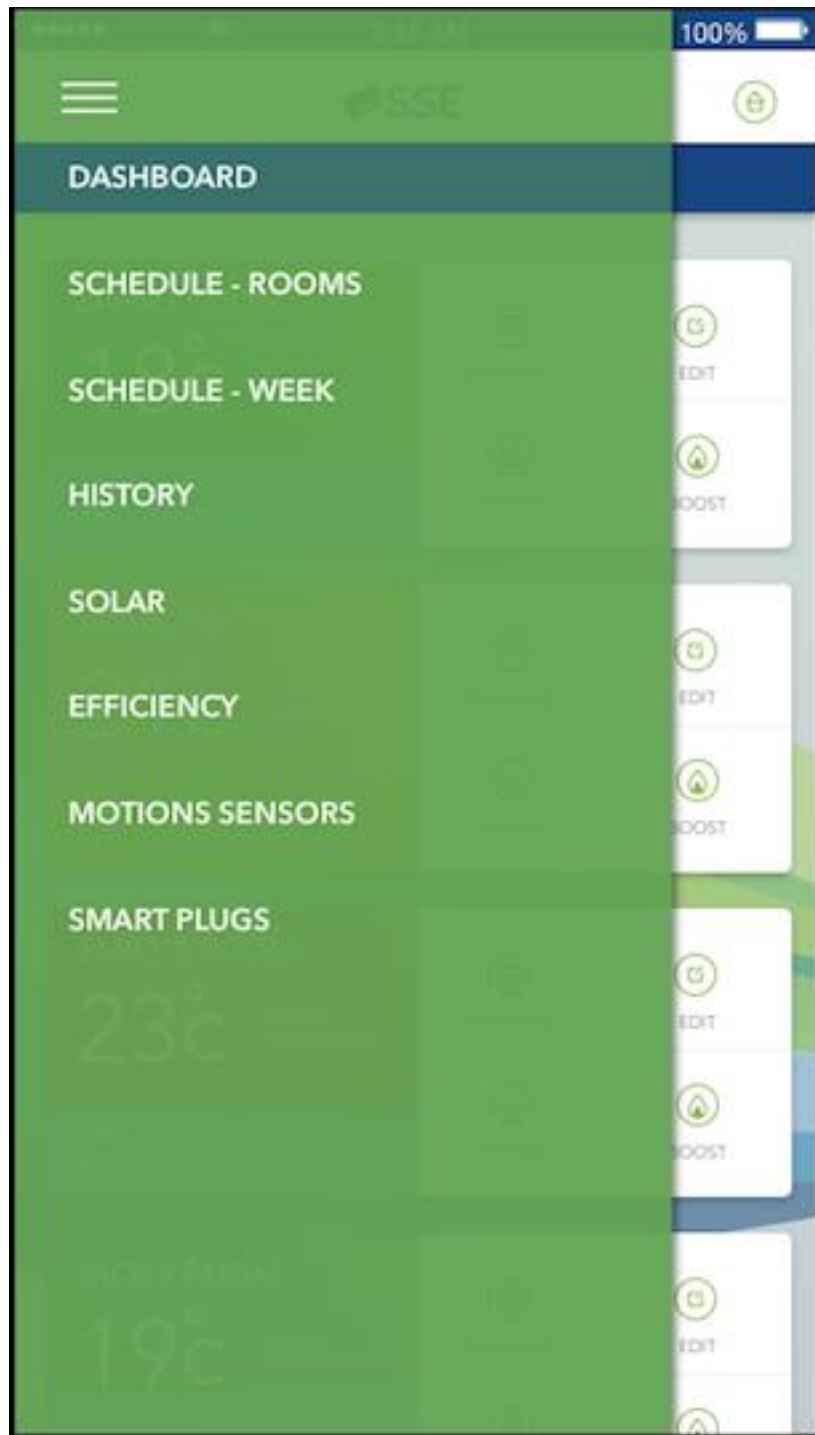


Figure 6: Menu Screen

Figure 6 demonstrates how different technologies can be accessed simply by clicking the menu button on the top left hand corner of the app to reveal a drop down menu.

5.2. User Interface Functionality



Figure 7: SETS Dashboard

The heating dashboard, as illustrated in Figure 7, shows data from each SETS appliance in the home. Users can see, the schedule for each room and the current temperature compared to the desired temperature. A colour coded system allows the user to easily get an indication of the room temperature and how that varies for each room. This view also provides the ability to boost the heating, edit the heating schedule and view historic data by clicking on the links on the right hand side.

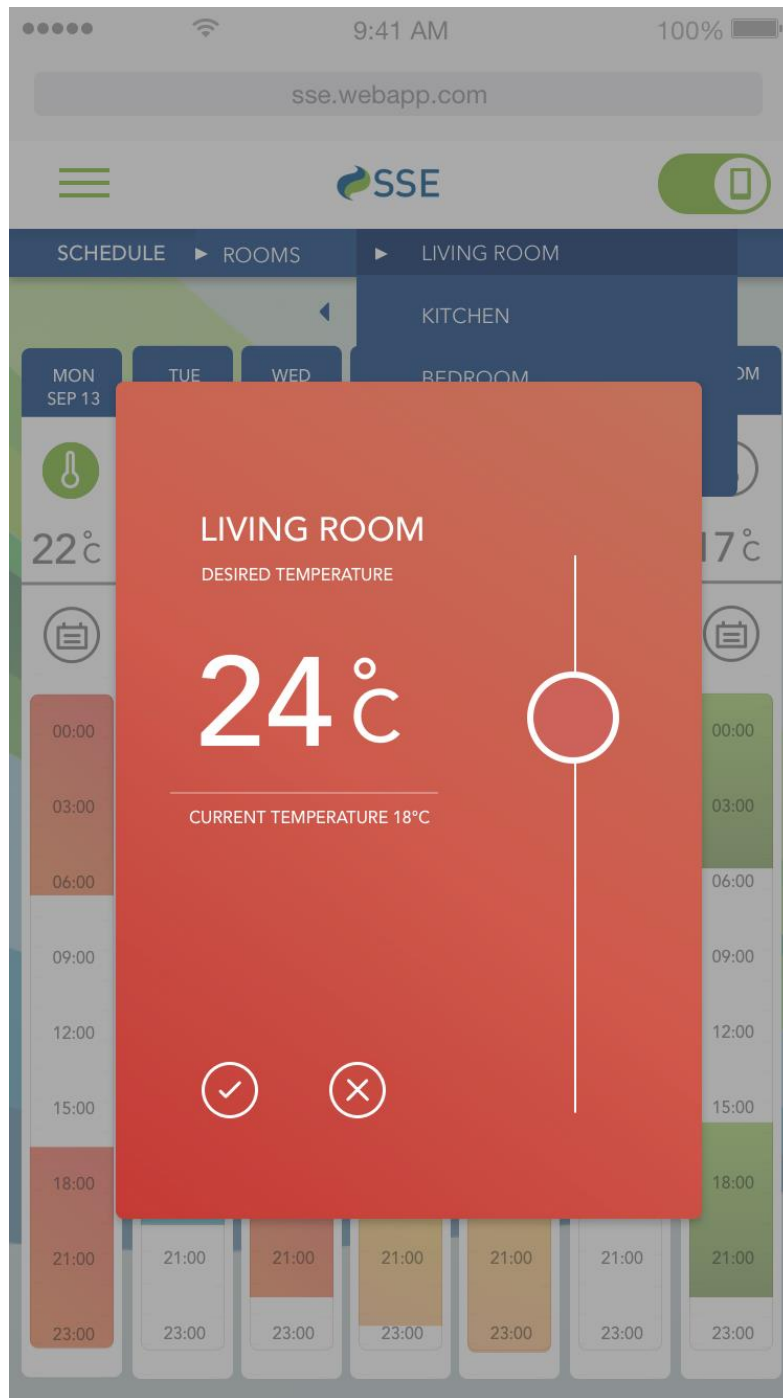


Figure 8: Temperature Controls

Figure 8 illustrates how the temperature for the room can now be adjusted by simply using a slider on a touch screen device. This is quicker to use and uses the same colour coordinated temperature indicator when changing the temperature.



Figure 9: Comfort Schedule Overview

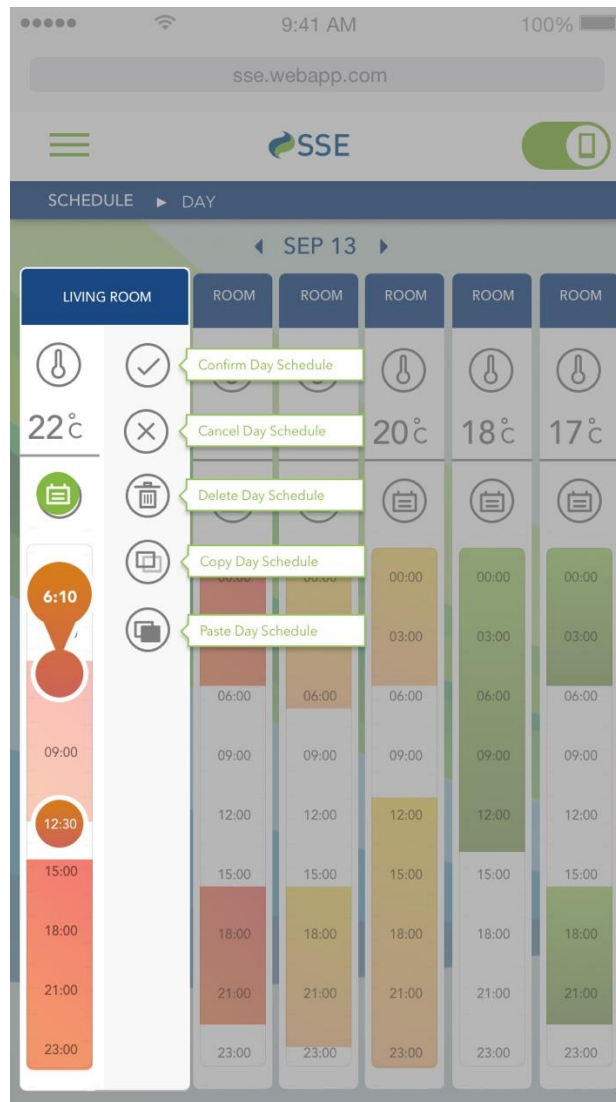


Figure 10: Altering Comfort Schedules

Users can also view heating and comfort profiles for an entire week, a feature that few smart thermostat systems offer. Figure 9 and 10 show the layout of the weekly schedule for a given room and how this schedule can be quickly and easily altered.

6. ACCESSING THE WEB APP

The user interface web app can currently be accessed on any laptop, mobile phone, tablet or PC, using the link, <https://sse.logicenergy.com/manager/>. It is not available as a native app but this is planned once the final developments to the user interface have been completed. This will further enhance the experience for the customer and provide further functionality, such as the ability to send push notifications.

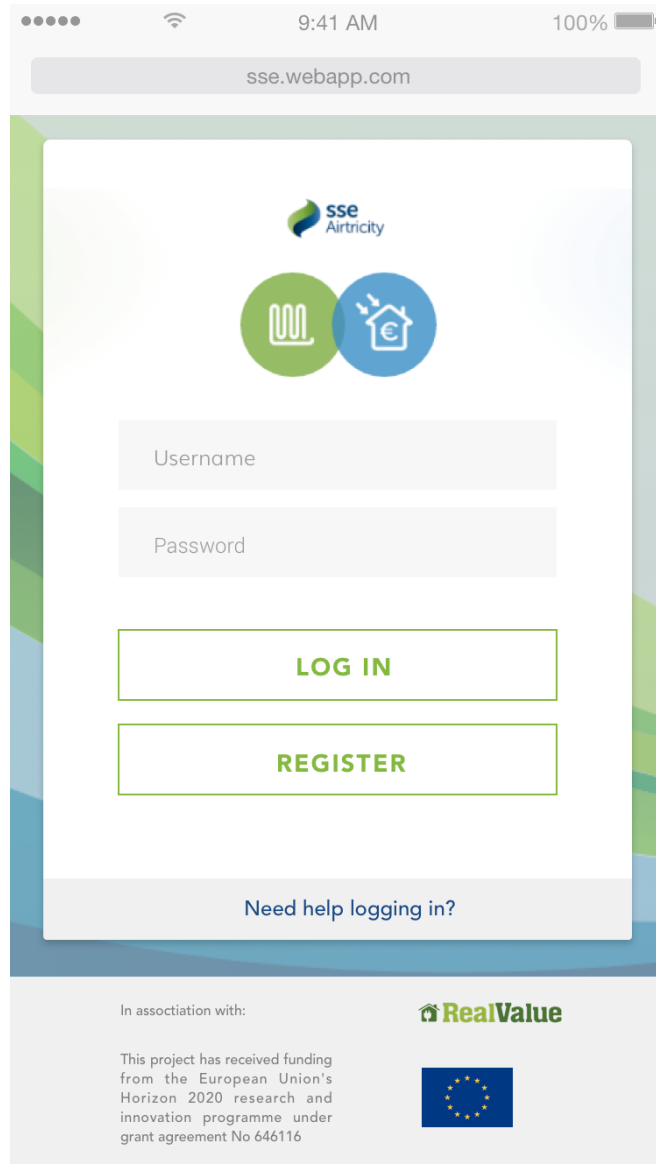
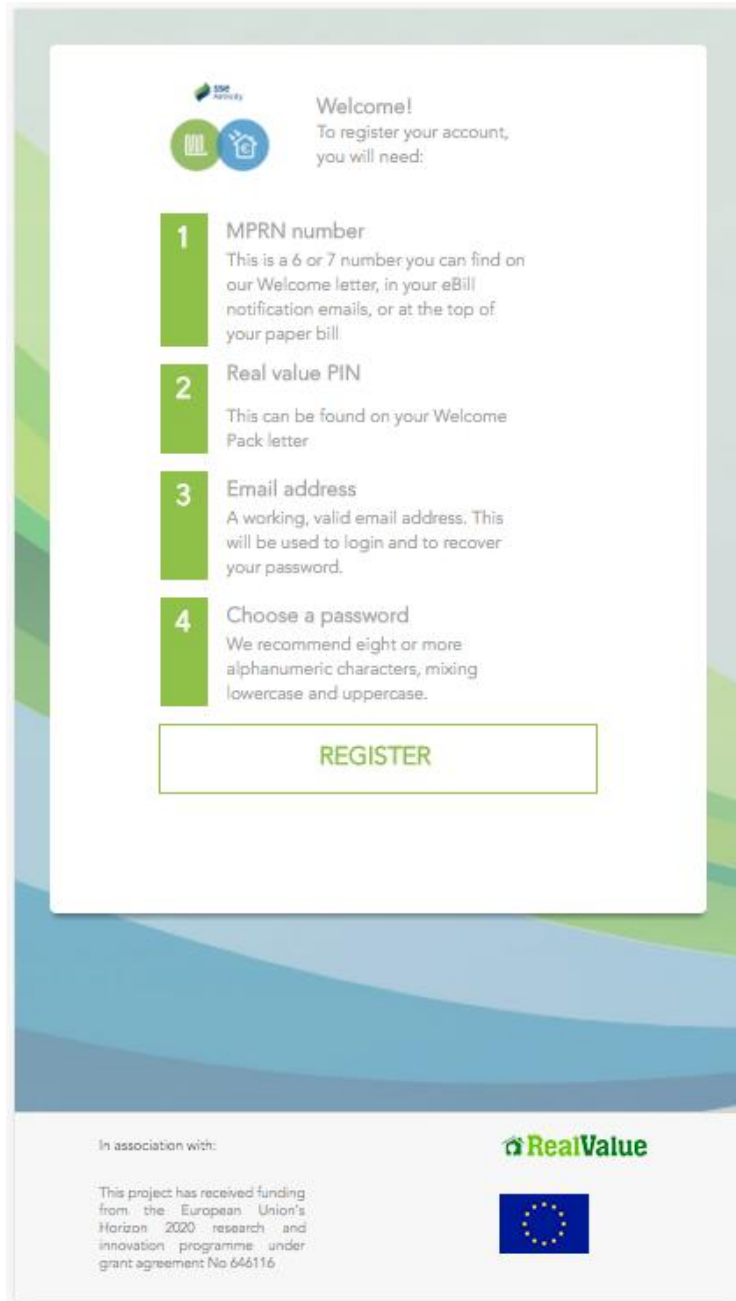


Figure 11: Log in Screen

The new login in screen is simple and uncluttered. The colour scheme and layout is in sync with other SSE Airtricity products and gives users a more uniform experience with other SSE Airtricity tools which they may use.



The image shows a registration page for the RealValue app. At the top, there is a 'Welcome!' message and a list of requirements for account registration. The requirements are numbered 1 through 4. Below the list is a 'REGISTER' button. At the bottom of the page, there is a footer with the text 'In association with:' followed by the RealValue logo and the European Union flag logo, along with the same funding information as in the top header.

100% smart

Welcome!
To register your account, you will need:

- 1** MPRN number
This is a 6 or 7 number you can find on our Welcome letter, in your eBill notification emails, or at the top of your paper bill
- 2** Real value PIN
This can be found on your Welcome Pack letter
- 3** Email address
A working, valid email address. This will be used to login and to recover your password.
- 4** Choose a password
We recommend eight or more alphanumeric characters, mixing lowercase and uppercase.

[REGISTER](#)

In association with:

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 646116





Figure 12: Registration Page

Figure 12 shows the information participants require when registering the app which is provided in the RealValue welcome letter.

6.1. Roll out status

A number of user profiles were issued to participants in June 2017 in order to test the platform. No major issues were reported, apart from a few navigational learning points, and as a result a full roll out to all remaining participants is ongoing throughout September 2017. Customers are sent an email with instructions and a link to login pages shown in Figure 11 and 12. Further queries and learning points may emerge over the live heating season.



Latvian partners in the trial also have access to the app. For control purposes their data is kept separate to Irish customers. The app was designed with visuals and graphics which help with any potential translation barriers. The user interface contains minimal text and most actions follow the lead of a graphic or image to improve customer experience. There is no difference between how the app works for Latvian and Irish users.

7. CONCLUSIONS

The web app user interface developed and reported in deliverable 2.4 has undergone user control enhancement to improve the customer experience. The processes embedded within the web app have remained largely unchanged with the addition of the functionality of hot water control. This additional functionality has been demonstrated and is operational to users who have cylinders installed in their properties.

The customer experience should improve as a result of an upgraded and simplified layout, which gives users an oversight of how efficient their energy use is.